

WHAT IS CLAIMED IS:

1. A method for adjusting an audio level of an audio device, comprising:
receiving a first audio signal from the audio device;
receiving a data packet from the audio device, the data packet comprising a
second audio signal;
5 determining whether a difference between the first audio signal and the second
audio signal exceeds a threshold value; and
adjusting the audio level of the audio device when the difference between the
first audio signal and the second audio signal exceeds the threshold value.

2. The method of claim 1 wherein the data packet further comprises a volume
level value, and
wherein the determining includes:
determining an average volume level of the first audio signal,
determining an average volume level of the second audio signal,
5 multiplying the average volume level of the second audio signal with
the volume level value to produce an adjusted average volume level,
comparing the average volume level of the first audio signal to the
adjusted average volume level, and
10 determining whether a difference between the average volume level of
the first audio signal and the adjusted average volume level exceeds the threshold value.

3. The method of claim 1 wherein the determining includes:

4. The method of claim 1 wherein the adjusting includes:

generating a data packet comprising a volume adjustment command, the volume adjustment command including a flag indicating that the audio level is to be increased or decreased,

adjusting the audio level based on the flag.

wherein the adjusting occurs when a time period since a previous audio level adjustment equals or exceeds the reactivity setting value.

7. The method of claim 1 further comprising:

determining, based on the determining whether a difference between the first audio signal and the second audio signal exceeds the threshold value, an amount to adjust the audio level of the audio device, and

adjusting the audio level based on the amount.

8. A system for adjusting an audio level of an audio device, comprising:
means for receiving at least one first audio signal from the audio device;
means for receiving a data packet from the audio device, the data packet
comprising at least one second audio signal;
5 means for determining whether a difference between the at least one first audio
signal and the at least one second audio signal exceeds a threshold value; and
means for adjusting the audio level of the audio device when the difference
between the at least one first audio signal and the at least one second audio signal exceeds the
threshold value.

9. A system for adjusting audio levels, comprising:
a sensor configured to:
receive a first audio signal,
receive at least one data packet comprising a second audio signal,
5 determine whether a difference between an average volume level of the
first audio signal and the second audio signal exceeds a threshold value,
generate a response data packet when the difference between the
average volume level of the first audio signal and the second audio signal exceeds the
threshold value, the response data packet including a volume adjustment command, and
10 transmit the response data packet; and
an audio device configured to:
transmit the first audio signal,

DOCKET NO. 2266960

transmit the at least one data packet to the sensor,

receive the response data packet, and

15 adjust an audio level based on the response data packet.

10. The system of claim 9 wherein the at least one data packet includes a volume setting value, and

 wherein, when determining, the sensor is configured to:

 multiply the average volume level of the second audio signal by the

5 volume setting value to produce an adjusted average volume level, and

 compare the average volume level of the first audio signal with the adjusted average volume level.

11. The system of claim 9 wherein the sensor is further configured to:

 determine whether the audio level of the audio device is to be increased or decreased.

12. The system of claim 11 wherein the response data packet further includes a flag indicating that the audio level of the audio device is to be increased or decreased, and

 wherein the audio device is configured to adjust the audio level based on the flag.

13. The system of claim 9 wherein the at least one data packet includes a reactivity

setting value, and

wherein the sensor generates the response data packet when a time period since a previous transmission of a response packet equals or exceeds the reactivity setting value.

14. The system of claim 9 wherein the sensor is further configured to:
- determine an amount of audio level adjustment, and
- store the amount in the response data packet.

15. A computer-readable medium containing instructions for controlling at least one processor to perform a method for determining whether to adjust a volume of a remote audio device, the method comprising:

receiving at least one first audio signal;

receiving a data packet comprising at least one second audio signal;

determining a difference between the at least one first audio signal and the at least one second audio signal;

comparing the difference to a threshold value;

generating a volume adjustment command when the difference exceeds the threshold value; and

transmitting the volume adjustment command to the remote audio device.

16. A computer-readable medium containing instructions for controlling at least

one processor to perform a method for adjusting a volume level, the method comprising:

transmitting at least one first audio signal;

generating a data packet, the data packet comprising at least one second audio signal;

5 transmitting the data packet to a remote device;

receiving a volume adjustment command from the remote device, the volume adjustment command comprising a flag indicating that the volume level is to be increased or decreased; and

adjusting the volume level in response to the flag.

17. A method for adjusting an audio level of an audio device, comprising:

receiving a first audio signal;

transmitting the received first audio signal to the audio device;

multiplying, at the audio device, a second audio signal by a volume setting

5 value to produce an adjusted second audio signal;

determining, at the audio device, a difference between the first audio signal and the adjusted second audio signal;

comparing the difference to a threshold value; and

10 adjusting the audio level of the audio source when the difference exceeds the threshold value.

18. The method of claim 17 wherein the determining includes:

determining whether the audio level is to be increased or decreased.

19. A system for adjusting an audio level, comprising:

a sensor configured to:

receive at least one first audio signal,

generate a data packet, the data packet comprising the at least one first

5 audio signal, and

transmit the data packet; and

an audio device configured to:

receive the data packet,

retrieve at least one second audio signal,

determine average volume levels of the at least one first audio signal

10 and the at least one second audio signal,

multiply the average volume level of the at least one second audio
signal with a volume setting value to produce an adjusted average volume level,

compare a difference between the average volume level of the first

15 audio signal and the adjusted average volume level to a threshold value, and

adjust the audio level when the difference exceeds the threshold value.

20. A computer-readable medium containing instructions for controlling at least
one processor to perform a method for adjusting an audio level, the method comprising:

receiving a data packet from a remote device, the data packet comprising a
first audio signal captured by the remote device;

5 determining an average volume level of the first audio signal;

 determining an average volume level of a second audio signal;

 multiplying the average volume level of the second audio signal by a volume
setting value to produce an adjusted average volume level;

 determining a difference between the average volume of the first audio signal
10 and the adjusted average volume level;

 comparing the difference to a threshold value; and

 adjusting the audio level when the difference exceeds the threshold value.

21. A computer-readable medium having a packet data structure comprising:
 a volume setting field that stores a value representing a volume setting of an
audio device; and

 an audio sample field that stores at least one audio sample.

22. The computer-readable medium of claim 21 wherein the packet data structure
further comprises:

 a reactivity setting field that stores a reactivity setting value.

23. A computer-readable medium having a packet data structure comprising:

 a destination address field that stores a destination address; and

 a volume adjustment command field that stores a value indicating that a
volume of an audio device is to be adjusted.

receiving a first audio signal, the first audio signal comprising a plurality of

receiving a data packet, the data packet comprising a second audio signal

determining, for each sub-band, whether a difference between a sub-band of
signal and a corresponding sub-band of the second audio signal exceeds a
e; and

adjusting the audio level of a sub-band at the audio device when the difference between a sub-band of the first audio source and the corresponding sub-band of the second audio signal exceeds the threshold value.